FIG.1

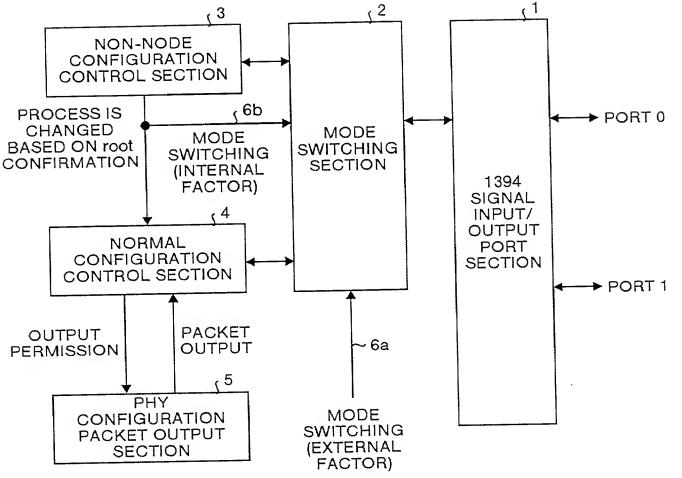

3
NON-NODE CONFIGURATION CONTROL SECTION
2
1
PROCESS IS CHANGED BASED ON root CONFIRMATION
6b
MODE SWITCHING (INTERNAL FACTOR)
MODE SWITCHING SECTION
PORT 0
1394 SIGNAL INPUT/ OUTPUT PORT SECTION
4
NORMAL CONFIGURATION CONTROL SECTION
PORT 1
OUTPUT PERMISSION
PACKET OUTPUT
6a
5
PHY CONFIGURATION PACKET OUTPUT SECTION
MODE SWITCHING (EXTERNAL FACTOR)

FIG.2

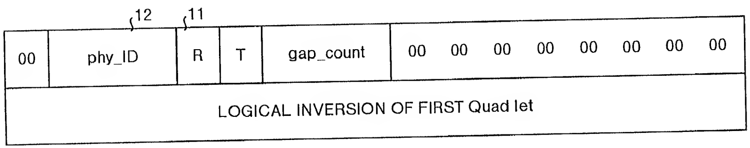

12
11
00
phy_ID
R
T
gap_count
00 00 00 00 00 00 00 00
LOGICAL INVERSION OF FIRST Quad let

FIG.3

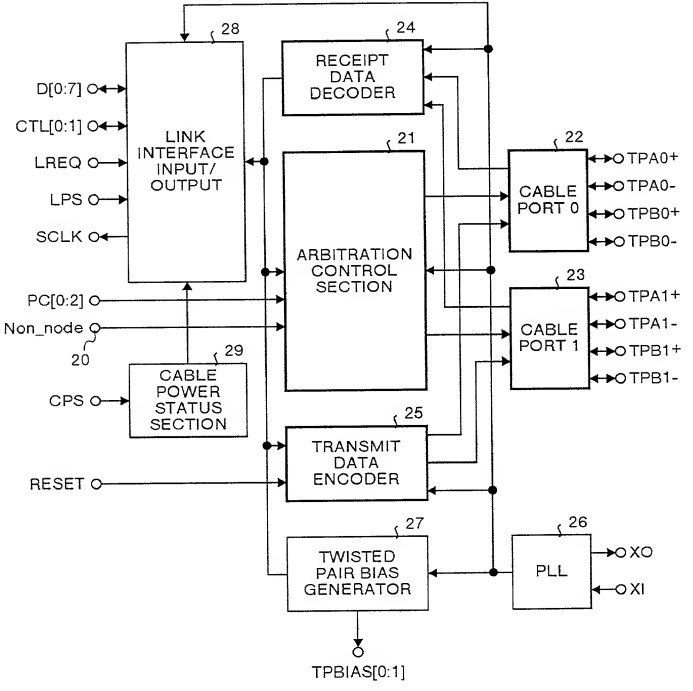

28
24
RECEIPT DATA DECODER
D[0:7]
CTL[0:1]
LREQ
LPS
SCLK
LINK INTERFACE INPUT/ OUTPUT
21
22
CABLE PORT 0
TPA0+
TPA0-
TPB0+
TPB0-
ARBITRATION CONTROL SECTION
23
CABLE PORT 1
TPA1+
TPA1-
TPB1+
TPB1-
PC[0:2]
Non_node
20
29
CPS
CABLE POWER STATUS SECTION
25
TRANSMIT DATA ENCODER
RESET
27
26
TWISTED PAIR BIAS GENERATOR
PLL
XO
XI
TPBIAS[0:1]

FIG.4

NAME OF TERMINALS	I/O	FUNCTION
TPA0+	I/O	FIRST PORT TWISTED PAIR CABLE A POSITIVE PHASE INPUT/OUTPUT
TPA0−	I/O	FIRST PORT TWISTED PAIR CABLE A NEGATIVE PHASE INPUT/OUTPUT
TPB0+	I/O	FIRST PORT TWISTED PAIR CABLE B POSITIVE PHASE INPUT/OUTPUT
TPB0−	I/O	FIRST PORT TWISTED PAIR CABLE B NEGATIVE PHASE INPUT/OUTPUT
TPA1+	I/O	SECOND PORT TWISTED PAIR CABLE A POSITIVE PHASE INPUT/OUTPUT
TPA1−	I/O	SECOND PORT TWISTED PAIR CABLE A NEGATIVE PHASE INPUT/OUTPUT
TPB1+	I/O	SECOND PORT TWISTED PAIR CABLE B POSITIVE PHASE INPUT/OUTPUT
TPB1−	I/O	SECOND PORT TWISTED PAIR CABLE B NEGATIVE PHASE INPUT/OUTPUT
XI	—	LIQUID CRYSTAL OSCILLATOR CONNECTION TERMINAL
XO	—	LIQUID CRYSTAL OSCILLATOR CONNECTION TERMINAL
TPBIAS0	O	FIRST PORT-USE TWISTED PAIR BIAS OUTPUT
TPBIAS1	O	SECOND PORT-USE TWISTED PAIR BIAS OUTPUT
D[7:0]	I/O	LINK INTERFACE DATA INPUT/OUTPUT
CTL[0:1]	I/O	LINK INTERFACE CONTROL INPUT/OUTPUT
LREQ	I	LINK REQUEST INPUT
LPS	I	LINK POWER STATUS INPUT
SCLK	O	LINK CONTROL-USE CLOCK OUTPUT
PC[0:2]	I	POWER CLASS SETTING (SEE IEEE Std 1394-1995, SECTION 4.3.4.1)
Non-node	I	NON-NODE/NORMAL MODE SETTING INPUT
CPS	I	CABLE POWER STATUS INPUT
RESET	I	RESET INPUT

FIG.5

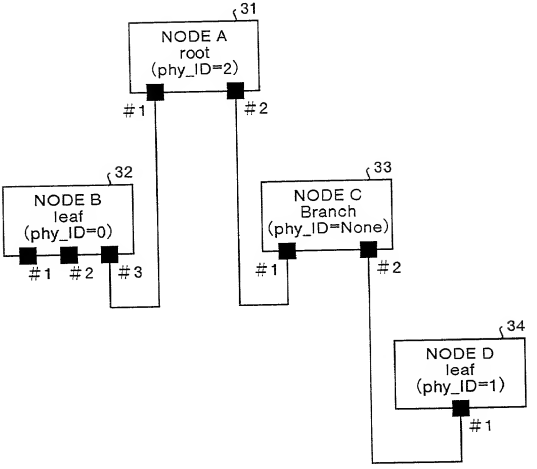
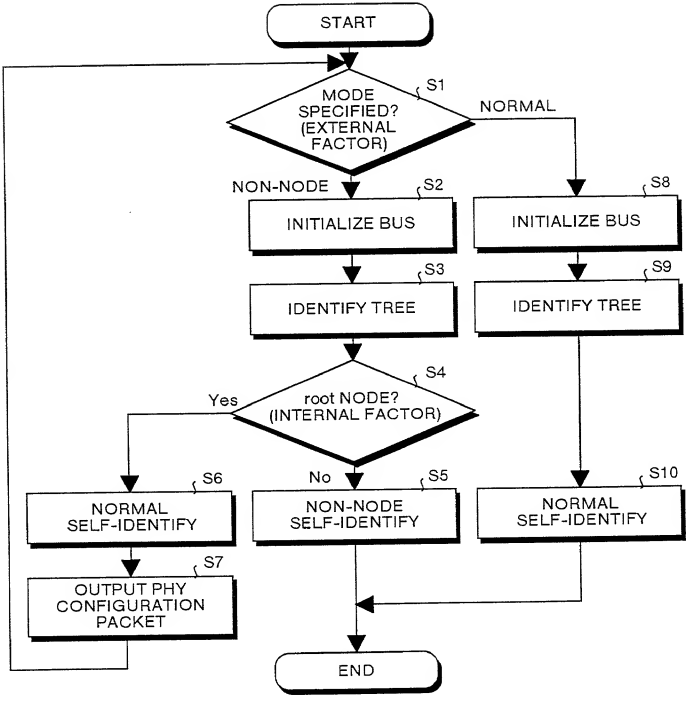

31
NODE A
root
(phy_ID=2)
#1
#2
32
NODE B
leaf
(phy_ID=0)
#1
#2
#3
33
NODE C
Branch
(phy_ID=None)
#1
#2
34
NODE D
leaf
(phy_ID=1)
#1

FIG.6


START
MODE SPECIFIED? (EXTERNAL FACTOR)
S1
NORMAL
NON-NODE
S2
INITIALIZE BUS
S8
INITIALIZE BUS
S3
IDENTIFY TREE
S9
IDENTIFY TREE
root NODE? (INTERNAL FACTOR)
S4
Yes
No
S6
NORMAL SELF-IDENTIFY
S5
NON-NODE SELF-IDENTIFY
S10
NORMAL SELF-IDENTIFY
S7
OUTPUT PHY CONFIGURATION PACKET
END